Mapline

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The Province of Ferrara in European Atlases from the 16th to the 18th Century

The Province of Ferrara, which straddles the lower valley of the Po River in northern Italy, has always been a difficult territory to map because of the complexity and mutability of its waters. In fact, the town of Ferrara itself, Alberto Penna wrote in 1658, "though on the mainland, might better be called an island given the great number of waters that surround it and pass through its midst." Not only did the waters of the great river frequently change course and overflow, but in the sixteenth and seventeenth centuries human action was responsible for further changes. For example, the Venetians between 1599 and 1604 attempted to limit the silting up of the Lagoon by diverting the waters of the Po near Porto Viro (Contarina). My own study of European maps that show the Province of Ferrara, undertaken in the cartographic collections of the Newberry Library, demonstrates how very slowly atlas cartography, prone as it was to repeated re-use of old images and information, responded to these changes.

Treuiso
Padoa
VENETIA
Lonigo
Rouigo
Montagnana
Este
Monselice
Lendenara
Badia
Lignago
Villanoua
Figarol
Carbonara
Concordia
Mirandola
Carpi
Correggio
Reggio
Modena
Rimolo
Bologna
Faenza
Forli
Cesena
Rimini
Pesaro
Fano
Arimino
Brisicola
Scarperia
FALDERONA
Pistoia
Prato
Pescia
Arno
M. Lupo
Fiorenza
Volterra
Sarsina
Bobbio
Soragna
Parma
Mirandola
Comacchio
Argenta
Ferrara
Rouigo
Este
Monselice
Padoa
Treuiso
Lonigo
Vicenza
Limene
Valdagno
Thiene
Asolo
Caldonazo
Trento
Marostega
Bassan
Feltre
Belluno
Cadore
Ampezzo
Tolmezzo
Gemona
Osoppo
Cividal
Vdine
Sacile
Conegliano
Ceneda
Belluno
Feltre
Primiero

Sixteenth-century mapmaking in Italy had reached its apogee above all in the person of the great Jacopo Gastaldi, and his map of Italy, "Disegno della Geografia Moderna di tutta la provincia de la Italia" (1561; Plate 1) offered a synthesis of the best maps produced in Italy to that time. This was the first image of Italy to be embraced by the Dutch atlas-making tradition, appearing in the 1570 edition of Ortelius' *Theatrum Orbis Terrarum*. Gastaldi's map also provides the best treatment of the lower Po valley in the sixteenth century among published maps. By way of comparison, for example, Mercator's map of Lombardy is based on a variety of sources of differing quality; his treatment of the lower Po valley did not serve well the complex topography and hydrography of the region.

Individual maps of many of the various Italian states and provinces had been available in printed form since the middle of the sixteenth century. R. V. Tooley, in his bibliography of "Maps in Italian Atlases of the Sixteenth Century" [*Imago Mundi* 3 (1939)], lists maps of twenty-four differ-

DVCATVS FERRARIENSIS,
FINITIMARVMQVE PARTIVM DESCRIPTIO
Auctore Ioan. Baptista Aleotti, alias l'Argenta
Scala miliarium Italico rum Ducatus Ferrariensis
Bologna
Ferrara
Imola
Ravenna
Padova
Este
Montagnana
Mesola
VALLE DI CO
MACCHIO
PO DI GOLFO
PO DI VOLANO
PO DI MAESTRA
PO DI TRAMONTANA
PO DI GIOVO
PO DI LEVANTE
PO DI MARE MORTA
PO DI SANTO
PO DI SANTA MARIA
PO DI SANTA GIORGIO
PO DI SANTA MARIA NOVA
PO DI SANTA MARIA MORTA
VALLE DI MARE MORTA
VALLE DI MARE VIVA
VALLE DI MARE

Plate 3. Giovanni Antonio Magini, "Ducato di Ferrara," from *Italia* (Bologna, 1630). The Newberry Library.

ent Italian regions. Ortelius included ten such maps in the first (1570) edition of his *Theatrum Orbis Terrarum*, while Mercator's *Atlas* (1595) had fourteen. However, the territory of Ferrara did not merit its own map in an atlas until 1608. A number of new maps of Italy are found in the 1608 Italian edition of Ortelius, prepared by Pigafetta and published at Antwerp by Vrients. Among these is a copy of the innovative "Corographia dello Stato di Ferrara" (Plate 2) by the Ferrarese engineer G. B. Aleotti, which had appeared in 1603. This latter image provided an entirely up-to-date and highly detailed image of the landscape of the Po valley. It was, moreover, the base from which subsequent local engineers and surveyors worked in making their own maps and plans. Yet after the Ortelius atlas went out of print in the 1620s Aleotti's map appears to have had little influence on the published cartography of the region.

At about the time that Gastaldi was assembling his image of the peninsula as a private scholar, a new kind of mapmaking was developing in Italy, involving close cooperation between territorial princes and cartographers, which would pave the way towards the publication of more and better maps of individual provinces. Giovanni Antonio Magini was the central figure in this development. He was the first map compiler to make extensive use of these

Plate 4. Johannes and Cornelius Blaeu, "Ducato di Ferrara," from *Le Theatre du Monde, ou Nouvel Atlas*, vol. 3 (Amsterdam, 1649). The Newberry Library.

official maps produced by the various Italian states and thus to bring localized surveys to bear in compiling his drawings for maps of Italy. This work eventually produced a general map of Italy (1608), which was much improved over that of Gastaldi and its Flemish copies, and a series of 60 regional maps (including one of Ferrara) that would after his death be published by Magini's son Fabio as the first atlas of Italy, *Italia* (Bologna, 1620). The lack of enforceable copyrights, however, meant that Magini's regional maps circulated widely and without his control well in advance of the publication of the atlas. And through these copies many of Magini's maps became the standard representations of Italian regions throughout the seventeenth century and into the eighteenth century. The influence of Magini's map of the territory of Ferrara (titled "Ducato di Ferrara;" Plate 3) on later published maps is typical. Its source may have been a map called "Ferrariensis Ditio" made in 1580 by Egnazio Danti and utilized by M. Pasi for his monumental "Carta dei Ducati Estensi," which was, however, inferior to Aleotti's map. The Magini map was thus already a generation behind when it made its way into the Dutch atlases that dominated the European map trade in the middle decades of the seventeenth century and which heavily influenced the published cartography through the beginning of the next century.

From 1631, the Amsterdam publishers Willem Janszoon Blaeu and his son Johannes issued an *Appendix* (or supplement) to the *Theatrum* of Ortelius and the *Atlas* of Mercator in an attempt to capitalize on the fame of these works. The owners of the original Mercator plates, the partnership of Hen-

Plate 5. Detail of Giovanni Giacomo Rossi, "Bassa Lombardia et altre appendici," in his *Mercurio Geografico* (Rome, ca. 1689). The Newberry Library.

rik Hondius and Jan Jansson, replied with their own enlarged atlas, and over the several decades the two publishing houses tried to outdo each other by producing ever larger atlases. In compiling these atlases they relied to a great extent on previously published maps, which they revised and re-engraved to suit their own format. Hondius and Jansson were the first to add Magini's maps to their atlases when in 1636 they were incorporated in the third volume of their *Atlas Novus*. Their map "Ducato di Ferrara" was based directly on Magini but was updated for the area of the Po Delta. Here for the first time in any atlas is a realistic representation of the changes in the silt deposits in the delta that had begun to build up after the Venetians cut their new channel. The representation of the city of Ferrara was also corrected in accordance with a 1599 plan by G. DiNovo. Johannes Blaeu responded in 1640 with his own version of Magini's map corpus. Blaeu's map of the province of Ferrara (Plate 4) copies Magini without alteration except in following Di Novo for the representation of the city.

The earliest map to have substantially modified Magini's vision of Italy was the imposing "Italia" of the Salzburg engraver Matthäus Greuter on twelve sheets (Rome, 1635), one of the largest representations of Italy produced in the seventeenth century. But like contemporary Dutch atlases its rendering of the territory of Ferrara improves little on Magini's atlas of 1620. For instance, the Papal fortress at the edge of the city, long since completed, does not appear at all.

A few isolated later seventeenth-century and early eighteenth-century atlas maps occasionally show some changes from the maps of Greuter, Hondius-Jansson, and Blaeu. No atlas map seems to have copied Magini exactly, but improvements were made in an inconsistent fashion. Advances made in some representations were not made in other, later ones, or else they were carried over only piecemeal. The work of Giacomo Cantelli da Vignola, for example, included in Giovanni Giacomo de Rossi's *Mercurio Geografico* (Rome, [1689]; Plate 5) depicts the delta zone in much more up-to-date fashion than previous maps. Magini's influence was still evident, however, in maps published by Sanson and Jaillot,

Plate 6. Detail of Frederik de Wit, "Accuratissima Dominii Veneti in Italia," in his *Atlas* (Amsterdam, ca. 1700). The Newberry Library.

and again in the map published by Frederik de Wit for his atlas around 1700 (Plate 6). In this last case Magini's influence is obvious in the way the drainage canals are drawn and in that the Reno empties into the Po Di Ferrara at Vigarano, something it had not actually done since 1604. An early eighteenth-century map of the domain of Venice in an untitled atlas by Matthaeus Seutter at the Newberry (made around 1730) has an updated version of Magini's delta and a much improved delineation of the swampy valleys south of the city. This map also differs from de Wit's in showing the Reno in its San Martina Valley position. The map containing Ferrara in the *Atlas Universel* by Gilles and Didier Robert de Vaugondy (Paris, 1757), though compiled much later than either Seutter's or de Wit's, depicts a much earlier state in the development of the Po Valley than they do. Similarly the 1750 *Atlante Novissimo* based on the maps of Guillaume Delisle shows the territory of Ferrara in a map of the Venetian Dominions that is not at all representative of the seventeenth- and eighteenth-century changes in the morphology of the lower Po valley.

It is clear, then, from this survey of maps of Ferrara that the seventeenth- and eighteenth-century maps published in European atlases depended for the most part on Magini's map published in 1620. Some changes were made in response to actual changes in the landscape, but there was no constant evolutionary process of updating across the period. Instead, we find frequent regressions and serious errors even quite late on because mapmakers did not often take account of their predecessors' work. They seem to have been concerned to include some document of the Ferrara Province, but they seemed content merely to copy whatever maps were readily at hand. Aleotti's innovative map of 1603 made its isolated appearance in Ortelius' atlas, but it was not destined to enter the mainstream of the Dutch atlas trade. Similarly the work of the local mapmakers and engineers of Ferrara, who took Aleotti's map as their point of departure for later maps, was largely ignored by atlas cartography.

Massimo Rossi
Istituto di studi rinascimentali
Ferrara

Newberry Acquisitions

Le Nin, *Livre des plans, des passages, et chausées de la Rivière de Somme.* Manuscript, 1644.

In northern France, the river Somme runs roughly 125 miles from its source near St.-Quentin, westwards to the English Channel. During the early seventeenth century, the Somme was an important barrier for France against the Spanish Netherlands to the north, and so in 1644 one of the French king's engineers, the sieur Le Nin (whom we have not yet identified) made a report on its defensive possibilities. He examined every bridge, ford, and crossing from above St.-Quentin to the sea, making a large-scale map of each of these sites; the map was keyed in to a written commentary.

The Newberry Library has recently acquired this report, which contains 44 plans like the ones reproduced above (about half actual size). Plate 1 shows the river near its source. A mill- dam ('C' and 'D') holds the water back in a pond ('E', middle right). To the west (top) is the village of Omissy ('G'), and to the east the larger village of Morcourt ('A'). It is very unusual to find individual buildings in a village delineated with such apparent precision as early as this.

Plate 2 shows the river as it approaches the town and citadel of Ham. This time east is at the top, and the map covers a much larger area. The river winds in between the low hills, and alongside the bed are marshy areas or water-meadows, sometimes no doubt flooded. These 44 views offer us a remarkable image of the small communities along the Somme in the middle of the seventeenth century.

Plate 1.

Plate 2.

Livre des Plans. . . was purchased by The Newberry Library thanks to the combined contribution of The Samuel R. and Marie-Louise Rosenthal Fund and the Arthur Holzheimer Map Fund.

Briefly Noted

Conferences and Exhibitions

***Maps and the Columbian Encounter* Update.** Planning continues on this exhibition of maps and related materials celebrating the five-hundredth anniversary of Columbus' encounter with America and its indigenous peoples. Four Midwestern libraries (The American Geographical Society Collection in Milwaukee, The Newberry Library, The James Ford Bell Library in Minneapolis, and The William L. Clements Library in Ann Arbor) will contribute to the exhibit and host it in 1992. An exhibit of facsimiles will begin touring later this Spring. For a brochure describing the exhibits write Mark Warhus, Exhibition Coordinator, Office for Map History, American Geographical Society Collection, University of Wisconsin-Milwaukee, P.O. Box 399, Milwaukee, WI 53201 (phone 414/229-4101).

Library of Congress. "The Emerald Isle in Maps," an exhibit of 68 historic maps and atlases of Ireland, opened on 7 January outside of the reading room of the Library of Congress' Geography and Map Division. The exhibition features a great variety of maps drawn from the library's collection, including wall maps, military surveys, estate maps, city plans, thematic maps, and harbor charts. One section of the exhibit called "The Irish-American Connection" is intended to acquaint visitors with the geographic resources for Irish genealogical research available in the G & M Division. "Emerald Isle" is one of the results of a ten-year project in the division to prepare a comprehensive catalogue (now being prepared for publication) of more than 12,000 maps, atlases, and nautical charts of Ireland the division holds. The exhibition will be open from 8:30 to 5:30 daily through 8 July on the "B" level of the James Madison Building, Library of Congress, 101 Independence Avenue, S.E., Washington.

History of Cartography Seminars in Barcelona. The library of the Institut Cartogràfic de Catalunya, together with the Department of Geography of the Universitat Autonòma de Barcelona, has organized a series of six annual seminars on the history of cartography to be held in Barcelona. Attendance at the seminars will be open to all parties interested in the theme, though the number of spaces is limited. The first seminar, intended to provide an overview of the history of cartography, was held 30 January–1 February 1990. Eila Campbell (London University), Monique Pelletier (Bibliothèque Nationale), and Montserrat Galera (Institut Cartogràfic de Catalunya) were the featured speakers. The five remaining programs (scheduled through 1995) will each have a national focus, beginning with Iberian cartography later this year or early in 1991. For further information, write the Institut Cartogràfic de Catalunya, c/o Balmes 209–211, 08006-Barcelona, Spain (phone 218 87 58 ext. 253).

New York Public Library. An exhibit entitled "Portugal-Brazil: The Age of Atlantic Discoveries," will be on view at the New York Public Library's Gottesman Gallery 2 June–1 September 1990. The exhibit will celebrate Portugal's role as a pioneer of European overseas maritime exploration and the jewel of that exploration, Brazil, while also surveying the impact of that discovery on European literature, philosophy and language. Over 150 items will be on display from more than 50 collections around the world. The New York Public Library is at 5th Avenue & 42nd Street, New York, NY 10019.

The British Library. The famous *Mappa Mundi* from Hereford Cathedral is on display in The British Library's exhibition galleries until such time that it can return to its Hereford home. The map can be viewed in the King's Library, Great Russell Street, WC1, London, Monday through Saturday between 10 A.M. and 5 P.M., and Sunday 2:30–6:00 P.M.

Map Societies

IMCoS Tenth Anniversary. The International Map Collectors' Society will celebrate its tenth anniversary this year. The society of map collectors, dealers, and scholars is based in England, and since 1982 has been holding annual international symposia at which papers are presented and maps displayed. This year's symposium meets in October in Washington, D.C. (see **Calendar**). The society publishes a quarterly journal for its members. For more information write the Membership Secretary, Mrs. Caroline Batchelor, 'Pikes', The Ridgeway, Oxshott, Leatherhead, Surrey, KT22 0LG, United Kingdom.

Maps and Facsimiles

Wreck and Casualty Chart of the Great Lakes, 1894. The Historical Society of Michigan has recently published a facsimile of a chart issued by the Weather Bureau, U.S. Department of Agriculture documenting the location and circumstances of 112 wrecks on the Great Lakes in 1894. The chart is one of a series of such charts issued in the late nineteenth century as a by-product of the bureau's weather forecasting and warning functions. It is, however, the only such chart to show the casualties of a single season. The locations of lighthouses, lifesaving stations, and navigational signals are also shown. The charts may be ordered from the Historical Society of Michigan, 2117 Washtenaw Ave., Ann Arbor, MI 48104 (phone 313/769–1828. The price (includes packaging, postage, and shipping) is $12.85 for Michigan orders, $12.44 for non-Michigan orders, and $15.85 for Canadian orders.

Heritage Maps, Inc., by special arrangement with the William L. Clements Library at the University of Michigan, has begun publishing facsimiles of maps illustrating Michigan history from the Renville Wheat Collection. Two maps are currently available: the James Finlayson map of Michigan Territory, 1822, drawn for Carey & Lea's *Complete Historical, Chronological, and Geographical American Atlas*, and David Burr's map of the state dated 1831. The facsimiles are published full-size and in full color. Each map is $29.95 ($2.25 per order will be added for shipping and handling). For further information and order forms, write Heritage Maps, 3109 Thompson Road, Fenton, MI 48430 (phone 313/629–5335).

Work in Progress

Inventory of Maps in Atlases of The British Library. A private effort has recently been initiated to produce a complete description of every map in The British Library's collection of 2000 pre-1800 atlases. The goal of the project, which is being undertaken by Rodney Shirley with the assistance of John Goss, is to produce a computerized data base from which printed collations and individual map descriptions could eventually be drawn. The individual map descriptions will be integrated into the new automated historical map catalogue the library is preparing. It has been said that no two old atlases are alike, and to the extent that this is true, the project promises to be extremely valuable to the historical study of atlas-making and the map trade in general. It will, for example, allow historians to compare the structure of these British Library atlases with that of similar ones in other collections or in existing bibliographies and checklists. When published, this data base will provide a particularly important contribution to the study of early non-county British atlases, since these are most inadequately described by existing lists and bibliographies. Already the project has turned up some previously unrecorded maps. Shirley and Goff's work is assisted by a Research Fellowship from the Leverhulme Trust and a grant from the Royal Geographical Society, whose collection is being taken into consideration. For further information about the project, write Map Library, The British Library, Great Russell Street, London, WC1B 3DG, England (phone 01–323 7525).

Publications Available

The U.S. Geological Survey recently published a guide to 90 projections, in both common and sparing use. ***An Album of Map Projections*** describes each projection in non-mathematical terms, touching on their origin, properties, visual characteristics, and utility. Each projection is reproduced by a computer plot. Mathematical formulas for most of the projections are supplied in an Appendix. To order, specify U.S. Geological Survey Professional Paper 1453, *An Album of Map Projections*, by John P. Snyder and Philip M. Voxland. Send check or money order for $14, payable to U.S. Geological Survey, to Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 80225 (phone 303/236–7476). A ***Bibliography of Map Projections*** (U.S. Geological Survey Bulletin 1856) edited by John P. Snyder and Harry Steward, listing more than 2500 works on projections dating from A.D. 150 to 1988, is also available at the same address. Its cost is $5.

Smith Center Announcements

Smith Center Fellows

W.A.R. (Bill) Richardson, who was a Smith Center Fellow in 1986, has recently published a lecture entitled *The Portuguese Discovery of Australia: Fact or Fiction?* delivered at the National Library of Australia. The lecture employs a critical analysis of the way inscriptions and toponyms are corrupted by repeated copying of manuscript maps to challenge the notion that a sixteenth-century Portuguese encounter with Australia occurred. Research on the subject was supported in part by Dr. Richardson's Smith Center Fellowship. The published lecture (32 p.) can be ordered from The National Library of Australia, Canberra ACT 2600, Australia, for $12 (Australian).

Two new Smith Center fellows are working at the Newberry this Spring. *Harry Montgomery*, a student in the Department of Geography, the University of Wisconsin-Madison, began a two-month fellowship in mid-February. Harry is studying the "Historical Geography of the Ptolemaic Atlases, 1477–1578." *Catherine Delano Smith*, who is a Senior Lecturer in Geography at the University of Nottingham, arrives this month for six weeks to continue her research on the history of cartographic signs and symbolic conventions in early modern maps. Catherine and Harry join *Jerry Danzer* (University of Illinois-Chicago) and *David Woodward* (University of Wisconsin-Madison), who have been in residence as long-term fellows.

New Publications

David Buisseret's illustrated historical survey of Illinois, *Historic Illinois from the Air* is scheduled for publication by the University of Chicago Press in Fall 1990. The book features nearly 300 illustrations, including modern and historical aerial photographs, space remote sensing imagery, and 68 illustrations and maps drawn especially for this publication by Tom Willcockson. The first part of the book uses aerial and space imagery to demonstrate the genesis and development of Illinois as a whole. The second part of the book focusses on Chicago and, in Buisseret's words, its survivals. "I want to show that under the veil of supermarkets and carparks we can still, with some effort, discern the early trails and structures of the nineteenth century." For a prospectus, write The University of Chicago Press, Attn: Mrs. Penelope Kaiserlian, Associate Director, 5801 S. Ellis Avenue, Chicago, Illinois 60637.

The Tenth Nebenzahl Lectures

Profiling the City: Six Studies in Urban Cartography

Preparations are nearly complete for the tenth series of the Kenneth Nebenzahl, Jr., lectures in the history of cartography, to be held at The Newberry Library on 7–9 November 1991. The speakers and their lecture topics are as follows: Naomi Miller (Boston University; "Mapping the City: Ptolemy's *Cosmography* in the Renaissance"), Nancy Steinhardt (The University of Pennsylvania; "Mapping the Chinese City"), Richard Kagan (Johns Hopkins University; "Imaging the City in Sixteenth-Century Spain"), Martha Pollak (University of Illinois-Chicago, "Military Architecture and Cartography in the Design of the Baroque City"), David Buisseret (The Newberry Library, "Modelling the City: the Collection of *Plans-reliefs* Formed by the Rulers of France"), and Gerald Danzer (University of Illinois-Chicago; "The Plan of Chicago by Daniel H. Burnham and Edward H. Bennett"). Dr. Pollak is also preparing an exhibit of military cartography which will be on view at the library during and after the lecture series.

Tom Willcockson's reconstruction of Chicago in 1839. Fort Dearborn is in the center of the view on the right bank of the Chicago River.

A photograph of the same area around 1975.

Recent Publications

The following six books are all published by Landmark Enterprises, which has been very active in publishing books on the history of surveying and mathematical geography with a strong North American emphasis. For prices and a list of other titles, write Landmark Enterprises, 10324 Newton Way, Rancho Cordova, CA 95670.

From Plane to Spheroid: Determining the Figure of the Earth from 3000 B.C. to the 18th Century Lapland and Peruvian Survey Expeditions/James R. Smith. 1986. 219 p.; illus. ISBN 0-910845-29-8.

Mr. Smith, a British Chartered Surveyor, has done a good job of summarizing attempts at measuring the circumference or sphericity of the earth. He begins with the experiment of Eratosthenes in about 230 BC and ends with the eighteenth-century work of the French, Spanish, and Swedish academicians who determined by measurement that the earth was an oblate spheroid and thereby confirmed the predictions of Newton. On the way we learn about Chinese and Arabic measurements of the earth and a fair amount about some of the mathematical processes, instruments, and personalities involved in early geodetic surveys. Fully half of the book is devoted to a detailed account of the expeditions to northern Scandinavia and South America, including some rather encyclopedic lists of survey stations, astronomical observations, and computations of results on various base lines. There is a good deal of mathematics in parts which this reviewer, at least, had to skip. Those particularly interested in the technology of the expeditions (their equipment and specific procedures) will find much information here. Smith's narrative is generally clear and readable, but citation is limited to a listing of general sources at the end of a chapter. This is a bit of a grab-bag book containing a mass of information not quite fully digested but one suspects that having it all together in one volume with a reasonably good index will make it a useful source for reference.

Plotters and Planners of American land Surveying: A Collection of Articles from the Archives of the American Congress of Surveying and Mapping/Roy Minnick, ed. 1985. 231 p.; illus. ISBN 0-910845-28-X.

This is a collection of 27 articles originally published 1950–76 in the ACSM *Journal of Surveying and Mapping* and the ACSM *Proceedings*. The book is divided into four sections: historical overview, surveying instruments, U.S. surveys, and surveys and surveyors. As the title suggests, the focus is principally on the history of American surveying (from colonial times to the twentieth century), though articles in the overview section touch on Roman, Chinese, and Egyptian surveying. The quality of the papers and articles seems in general to be high, and anyone interested in the history of surveying on this continent will thank editor Minnick for bringing together a quarter-century of contributions to the field.

An American Topographer: The Working of George Stanley Druhot, 1914–1963/George Stanley Druhot. 1985. 238 p.; illus. ISBN 0-910845-25-5.

Stan Druhot started with the U.S. Geological Survey in 1914 as a rodman and retired in 1959 as an administrator in the western office of the Survey in Menlo Park, California. He was in the field for the better part (and clearly the happiest part) of those years, with assignments in many of the western states and Hawaii. Thanks to forty volumes of account books, Druhot is able to remember (and here recounts) the smallest details of everyday life and the wealth of homely minutiae will give this volume value for social historians interested in the texture of life in a certain kind of itinerant professional family in the 1920s, 30s, and 40s. For those primarily interested in the technical aspects of Druhot's career, some skimming is in order, but there are fascinating nuggets to be found, including much on the Survey's early use of aerial photographs and the somewhat diffident attitude some topographers felt towards them (they did, after all, kill the job of topographer). I wonder if the official survey

manuals of the 1910s discussed the buggy-wheel traverse or the whoop-and-holler traverse, or gave information about the speed of mapping? This information is here, along with the watershed date of 1943 when the Survey ceased putting the names of topographers on the quadrangle sheets, because the responsibility had become too diffuse. An engaging and insightful memoir by a now-extinct breed of mapmaker.

They Left Their Mark: A Biography of William Austin Burt/John S. Burt. 1985. 188 p.; illus. ISBN 0-910845-31-X.

This is a biography of the man who surveyed a large part of the upper peninsula of Michigan as a General Land Office surveyor, and invented the solar compass which revolutionized the surveying of the public lands after it was generally introduced in 1855. On the way, Burt invented a typewriter and an equatorial sextant for use on board ships, and was a major force in the economic development of the upper peninsula of Michigan. He was a likeable and apparently incorruptible example of a nineteenth-century industrious Yankee and, in the words of Robert Traver's foreword, "probably one of the best of our neglected native geniuses." He is well served by his great-great-great-grandson's adeptly written, appreciative and well-documented biography. Anyone interested in the land office surveys of the mid-nineteenth-century will certainly want to consult this book.

Early American Scientific Instruments and Their Makers/Silvio A. Bedini. 1986. 189 p.; 85 pl. ISBN 0-910845-30-1.

This little book crammed with information is a reprint of a work first published by the Smithsonian Institution as the U.S. National Museum Bulletin No. 231, which has long been out of print. Most of the book is a series of biographical sketches of American instrument makers up to the early nineteenth century. *Early American Scientific Instruments* will have great appeal for instrument collectors, while its indexes and bibliography make it a useful reference. Unfortunately, the plates in this new edition are often fuzzy; they appear to be photographs of the illustrations from the previous edition, rather than new printings from the original negatives.

Basic Geodesy: An Introduction to the History and Concepts of Modern Geodesy without Mathematics/J. R. Smith. 1988. 151 p.; illus. ISBN 0-910845-33-6

As its title implies, the author of this introduction to the "science that determines the figure of the earth and the inter-relation of selected points on its surface" has tried to avoid the use of complicated mathematical formulas. He relies instead on elegantly clear full-page two-color diagrams illustrating basic principles and arranged roughly in the chronological order of their discovery, development, or use. The most likely audience for this book is not future geodesists or surveyors — alas, they will have to move quickly on to formulas — but rather those of us who are mathematically illiterate or phobic yet would like to learn more about the way surveying and geodesy works. This goal is accomplished rather well. It is, however, a source of constant irritation that the 63 figures so essential to the task are not themselves labelled and numbered, despite frequent reference to them by number in the text (the reader is obliged to refer to the list of figures at the beginning of the book for help).

Maps with the News: The Development of American Journalistic Cartography/Mark Monmonier. Chicago and London: University of Chicago Press, 1989. 331 p.; illus. ISBN 0-226-53411-1 (Order from The University of Chicago Press, Order Department, 11030 S. Langley Avenue, Chicago, IL 60628, phone 800/621-2736; hdbk. $24.95)

This is a most welcome and thorough investigation of a neglected aspect both of the history of cartography and modern cartographic practice. Monmonier has investigated the subject of jour-

nalistic cartography from every conceivable angle: the technology, the economics, the structure of the workplace, trends in the frequency of map use and the types of maps used, to name a few. Carto-historians will find chapters on the early technology and the role of syndicates and wire services in fostering cartographic journalism rewarding, but (quite appropriately) this book does not draw a line between "history" and the "present." A chapter on journalistic cartography in electronic media makes a no less significant contribution to the field. Perhaps because it is so familiar to us, late nineteenth-century and twentieth-century cartographic forms are as yet largely unexplored by carto-historians. Monmonier's clear and well-illustrated account takes an important step in charting this territory.

The Historical Atlas of Political Parties in the United State Congress, 1789–1989/Kenneth C. Martis. New York: Macmillan, 1989. 518 p.; 101 maps. ISBN 0–02–920170–5 (Order from Macmillan Publishing Co., Inc., 866 Third Avenue, New York, NY 10022, $190)

In this very large book (13.5 inches tall by 18 inches wide, 10 pounds) Martis utilizes the congressional district maps in his prize-winning earlier work, *The Historical Atlas of United States Congressional Districts: 1789–1983* (New York: Free Press, 1982), as bases to map the parties of members of the House of Representatives. The maps are exceptionally attractive, strong, clear, and effective, thanks to cartographer Ruth Anderson Rowles. Each congress has a large national map (with inserts for tiny districts) showing all House districts, a small map showing only the states for the Senate, and a pie chart on which a party's slice is directly proportional to its percentage of House membership. All members of a particular congress are listed with its maps. Fifty different political parties are symbolized by unique hues, yet not one map hits the reader with the sort of vibrating color "jump" that comes from juxtaposing orange and blue. Rowles provides an exceptionally lucid explanation of how she designed the maps. In addition to the superb cartography, this volume achieves a new level of accuracy in identifying the political affiliation of every representative and senator. The task was enormous: 11,175 individuals have served in Congress: 31,302 initial elections have been held just to fill the seats in the House; old references for party affiliations disagree on thousands of them. Each election and individual is accounted for in a series of annotated tables, which give the sources for the party designations. These revised party designations will be used in a bicentennial directory to be published by Congress itself. The table of contents and the indexes are poor; there is no list of the tables. No book can be the final word on party affiliation—especially for the early congresses—but this atlas gets closer to that ideal than anything else we will see for a long time.

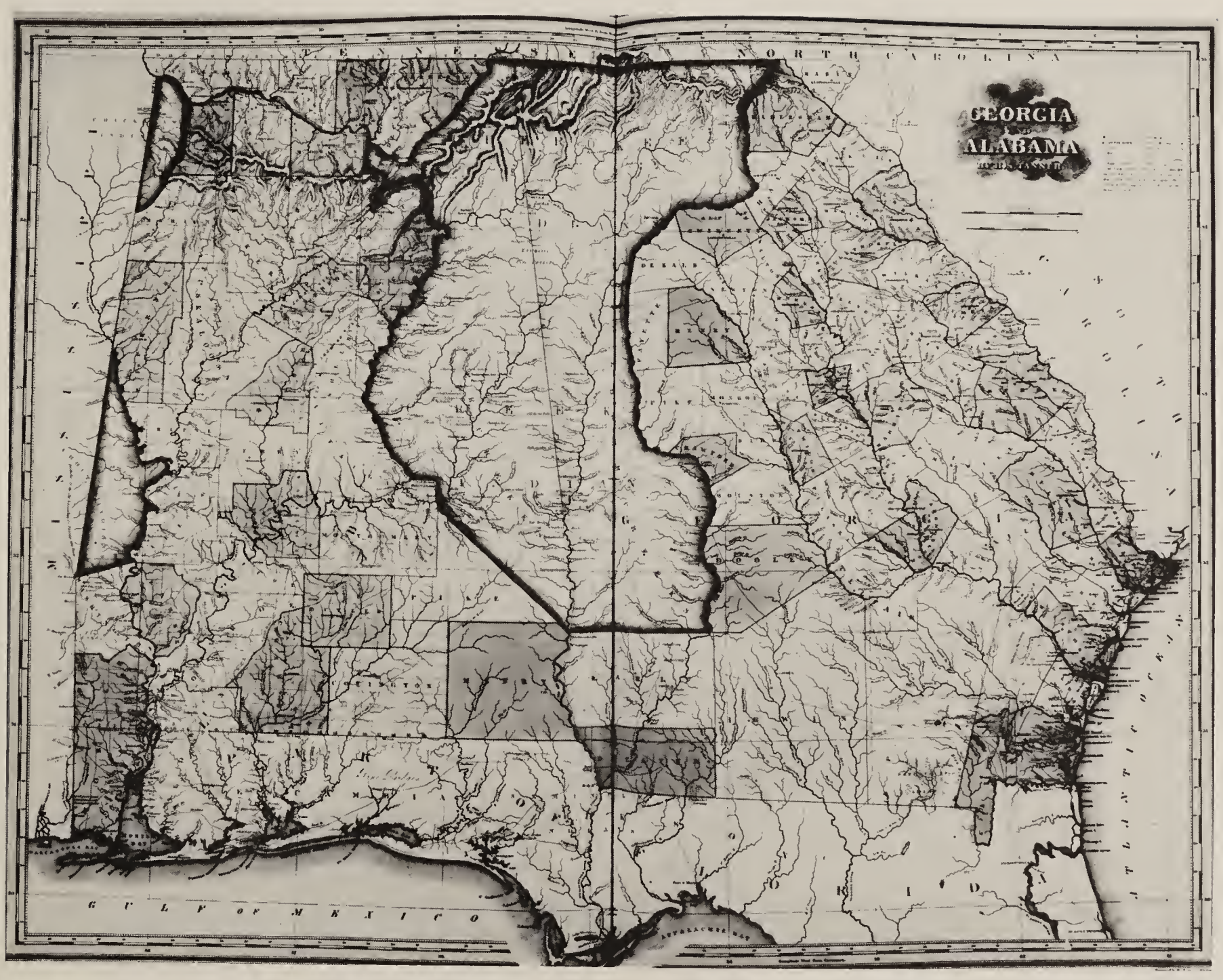
Österreichische Karten des frühen 19.Jahrhunderts, vol. 2 of *Österreichische Kartographie im 18. und zu Beginn des 19.Jahrhunderts unter besonderer Berücksichtigung der Privatkartographie zwischen 1780 und 1820*/Johannes Dörflinger. Vienna: Österreichischen Akademie der Wissenschaften, 1988. 526 p.; 24 pl. ISBN 3–7001–1480–X (Order from Verlag der Österreichischen Akademie der Wissenschaften, Dr.-Ignaz-Seipel-Platz 2, A-1010 Wien, Austria; pbk. ÖS 630, DM 90)

The first volume of this massive survey of Austrian commercial cartography ca. 1780–1820 was published in 1984 (*Österreichische Karten des 18.Jahrhunderts*). Each volume is confined roughly to the two twenty-year periods on either side of 1800, though there is some overlap. The work is in essence an annotated bibliography, with each chapter being a thumbnail sketch of the history of a particular firm, individual, or school and full descriptions of every map each is known to have published, including each map in every atlas. In other words, this is not a work intended for the casual reader, but it will unquestionably be the standard reference for this active and prestigious period in the Austrian map trade and the starting point for further research and synthesis.

Map Talk

The Indian territory is admitted to compose a part of the United States. In all our maps, geographical treatises, histories and laws, it is so considered.

Opinion of Chief Justice Marshall in *Cherokee Nation* v. *Georgia*.



Henry Schenk Tanner, "Georgia and Alabama," from *A New American Atlas* (Philadelphia, 1823). The Newberry Library.

Calendar

7 April 1990
A joint meeting of the Washington and New York Map Societies at New York's Museum of Natural History is planned for 11:00 A.M. The program is yet to be announced.

12 April 1990
The Chicago Map Society meets at The Newberry Library (60 W. Walton St., Chicago) at 5:30 P.M. Gary Fitzpatrick will speak on the mapping of Hawaii.

17 April 1990
Gary North, Assistant Chief, National Mapping Division, U.S. Geological Survey, will give a status report on Soviet mapping to the Washington Map Society at 7:00 P.M., in the Library of Congress, Geography and Map Division, Reading Room.

19 April 1990
Dr. Helen Wallis, Curator Emeritus of the Map Room at the British Library, will speak at a special meeting of the Chicago Map Society at 5:30 P.M. at Chicago's Newberry Library. Her lecture topic is to be announced.

19–22 April 1990
The Association of American Geographers (AAG) 86th Annual Meeting will convene in Toronto. For further information write the AAG, 1710 Sixteenth St. NW, Washington, DC 20009-3198.

26 April 1990
At 5:00 P.M. Dr. Helen Wallis, formerly Curator of Maps of the British Library, will give the inaugural lecture of the Arthur Holzheimer *Maps and America* Annual Lecture Series, at the American Geographical Society Collection, the University of Wisconsin-Milwaukee. Dr. Wallis will speak on "Columbus and the Early Maps of America: Island and Mainland in the Ocean Sea." For further information contact the Office for Map History, AGS Collection, Golda Meir Library, University of Wisconsin-Milwaukee, P.O. Box 399, Milwaukee, WI 53201 (phone 414/229–4101).

7 May 1990
The New York Map Society plans a walking tour of Lower Manhattan led by Jack Stadler and Sy Amkraut to begin at 11:00 A.M. at a site to be announced.

15 May 1990
The annual dinner and business meeting of the Washington Map Society will convene at a site to be announced. Nancy Miller, Appraisal Archivist, National Archives and Records Administration, will present a talk entitled "The Biggest Map Collector: How the Federal Government Decides What Maps to Keep."

10 May 1990
The Chicago Map Society will hear a lecture by Kevin Kaufman (of the History of Cartography Project at the University of Wisconsin-Madison) at 5:30 P.M. at The Newberry Library. The program topic is to be announced.

10–13 June 1990
Canadian Cartographic Association Annual Meeting, Victoria, B.C. Contact Dr. C. Peter Keller, Dept. of Geography, University of Victoria, P.O. Box 1700, Victoria, B.C., V8W 2Y2 (phone 604/721–7333).

23–28 June 1990
The Map and Geography Round Table (MAGERT) of the American Library Association (ALA) will meet during the ALA's annual conference in Chicago.

1–4 October 1990
The Eighth Annual International Symposium of the International Map Collectors' Society (IMCOS) will be hosted by the Washington Map Society and meet in Washington, D.C. For information, contact Eric W. Wolf, 6300 Waterway Drive, Falls Church, VA 22044, or Malcolm R. Young, Whyr Farm, Winterbourne Bassett, Swindon, Wiltshire, England SN4 9QE.